Chapter 16
Development Documentation

Chapter Overview

This chapter contains five annotated outlines for the documentation associated with software development.

In This Chapter

Section A
Deliverable Overviews

Introduction

The documents in this chapter are those deliverables that are first created during the Design and Programming Phases of a system development project.

System Design

The System Design covers all the information needed for a programmer to generate source code to implement the required system.

Note: Other documents may be created during the System Design Phase (e.g., System Architecture, Interface Specifications, etc.) depending on the size and complexity of the system under development. As appropriate, those documents can be referenced in the System Design document described in this section.

Program Source Code

Program source code represents the human side of the machine/human interface. It is the human-written text that is converted into machine readable commands to perform the functions necessary to fulfill the user's requirements.

Source code should be written and annotated in accordance with accepted Customs programming standards. Program specifications often documented as part of the source code include the program identification, programmer, general description of program function and structure, date code was tested and approved, and dates and descriptions of all modifications.

Operator's Manual

This deliverable is intended to supply the Systems Operation Division with all the information needed to execute the job successfully. The type of information requested applies to all computer platforms, although the terminology may change somewhat between the PC, mainframe, and client/server systems.

The document also includes information/instructions to the operators on how to handle any abnormal terminations (ABENDS) of the application program.

User Documentation

This deliverable tells the user:

- What the system does
- How to use the system

Turnover Package

The turnover package consists of the most recent versions of all planning and programming documents.

Section B
Program Documents

Section Overview

This section addresses the two documents that must be generated by the System Development Team members who are designing the system and writing the code to fulfill that design.

Responsibility

These documents are prepared by appropriate members of the System Development Team. The System Design describes the system and documents the decisions included in the Critical Design Review and Design Walkthroughs. It must contain all necessary system/subsystem specifications and may contain the program specifications as well.

Reference: Volume II, Chapter 7, Section C, *System Design*, for a discussion of activities

The design and source code documentation and their compliance with standards must be validated by the Developer's Team Leader before the system/program is considered ready for testing and turnover.

In This Section

Annotated outlines are provided for the following deliverables:

SYSTEM DESIGN

Project Name:		Project Number:	
Date Prepared:	Date Updated:	Date Presented:	Date Approved:

1. 0 System Overview

1.1 Overview: Provide an overview of the system to be developed. Describe how the application embodies the user's functional requirements.

1.2 Functions: Specify the system/subsystem function in quantitative and qualitative terms and how the functions will satisfy the functional requirements.

1.3 System/Subsystem Logic: Describe the logic flow of the entire system/subsystem in the form of a flowchart/diagram. The flow should provide an integrated presentation of the system/subsystem dynamics, of entrances and exits, computer programs, support software, controls, and data flow.

1.4 Flexibility: Describe the capability for adapting the program to changes in requirements, such as:

1.4.1 Modes of operation

1.4.2 Operating environment

1.4.3 Interfaces with other software, activities, and resources

1.4.4 Accuracy, validation, and timing

1.4.5 Planned changes or improvements

1.4.6 Identify the system/subsystem components which are specifically designed to provide this flexibility

Continued on next page

SYSTEM DESIGN, Continued

Note: The organization of the contents of Sections 2, 3, and 4 may vary according to the purpose of the documentation. See the examples at the end of this outline.

2.0 Operational Environment

2.1 Operations: Describe the operating characteristics of the user and computer centers or sites where the software will be operational.

2.2 Equipment: Identify the equipment required for the operation of the software. Identify any new equipment required and relate it to specific functions and requirements to be supported. Include information such as:

2.2.1 Storage, online and offline, media, form, and devices
2.2.2 Input/output devices, online and offline
2.2.3 Data transmission devices

2.3 Support Software: Identify the support software and describe any test software. If the operation of the software depends on changes to support software, identify the nature and planned date of these changes. Include any software that will be required to create and test online help information.

2.4 Interfaces: Describe the interfaces with other software, both internal and external. If there are to be no interfaces, state this fact.

2.5 Security and Privacy: Describe the overall security and privacy requirements imposed on the software. State whether the system must exceed the Custom standard C2, security level, and whether records are governed by the Privacy or Trade Secrets Act. If no specific requirements are imposed, state this fact.

2.6 Controls: Describe the operational controls imposed on the software. Identify the sources of these controls.

3.0 Design Alternatives

Describe each alternative system design considered. If no alternatives were considered, state this fact.

Continued on next page

SYSTEM DESIGN, Continued

4.0 Program Specifications

Note: Program specifications may be included in this section. It is an accepted practice in Customs to document program specifications within the program source code. Refer to the Program Source Code topic in this section for specific information to be included.

4.x (Identify) Program Specifications: Specify the system/subsystem functions to be satisfied by the specific computer program.

4.x.1 Describe the program requirements
4.x.2 Describe the operating environment
4.x.3 Describe the design characteristics of the program including inputs, program logic, outputs, and database

Examples of Alternative Section Outlines

Sections 2, 3, and 4 of this document may follow one of several alternative outlines depending on the purpose to which the document is directed. Examples of alternative purposes and outlines:

Example A: When this document is directed to the documentation of a given system or subsystem and is not to specifically include the documentation of any subsystem, the appropriate title would be "System (Subsystem) Specification" and the outline for the specification would be:

System Overview
- Description
- Functions
- Performance

Operational Environment
- Equipment
- Support Software
- Interfaces
- Security and Privacy
- Controls

Design Characteristics
- Operations
- Logic

Continued on next page

SYSTEM DESIGN, Continued

Examples of Alternative Section Outlines (continued)

Example B: When this document is directed to the documentation of a system and its subsystems, the appropriate title would be "System and Subsystem Specifications". The outline, in brief, for the specification would be:

System Overview
System Operational Environment
System Design Characteristics
Subsystem 'n' (Identify each)
    Requirements
    Operational Environment
    Design Characteristics
    Program Specifications

Example C: In any of the above examples, the program specifications may be documented within as a separate section; as subsections to each subsystem section; or may be documented in a separate document identified as "Program Specifications".

Example D: In any of the above examples, the information identified in the Security Design may be detailed in this document or in a separate document. **Reference:** See Chapter 15, Section E.

Example E: In any of the above examples, the subsystem(s) may be documented with Process Flow Models and Process Descriptions. **Reference:** See Chapter 9, Sections D and E.

Definitions: A process flow model identifies all programs and maps associated with the subsystem and illustrates how these programs interact with other subsystems and specific databases. Process flow models are typically prepared using Data Flow Diagram (DFD) techniques, but other representations may be employed as appropriate.

A process description is required for every program identified in the process flow model. While process descriptions are not intended to replace commented source code, they should provide a complete summary of all program logic. Process descriptions should be as brief as possible and easily understood by a non-programmer. Any processing algorithms must be clearly identified.

PROGRAM SOURCE CODE

Project Name:		Project Number:	
Date Prepared:	Date Updated:	Date Presented:	Date Approved:

1. 0 General Information

Note: It is an accepted Customs practice to document program specifications within the source code. However documented, the specification should follow the contents of this outline, omitting any unnecessary entries.

If the application is being developed using original (e.g., in-house) coding, the program code should be developed/generated, catalogued, and kept on file for reference purposes. The code should be written and annotated in accordance with accepted programming standards.

1.1 Program Identification

1.2 Programmer Name

1.3 Modification Log: This is a continuing log that identifies the programmer, date, and summarizes each modification made to the program.

1.4 Summary: Summarize the specifications and functions of the computer program to be developed.

1.5 Environment: Identify the project sponsor, developer, user, computer center or site where the computer program is to be run. Also, identify the hardware and operating system environment the computer program will run in.

1.6 References: List applicable references, such as:

1.6.1 Project request (authorization)
1.6.2 Previously published documents on the subject
1.6.3 Documentation concerning related projects
1.6.4 FIPS publications and other reference documents

Note: These references should be included with analysis and design documentation and are **optional** in the program specifications.

Continued on next page

PROGRAM SOURCE CODE, Continued

2.0 Requirements

2.1 Program Description: Provide a general description of the program to establish a frame of reference for the remainder of the document. Include a summary description of the system/subsystem functions to be satisfied by this program.

2.2 Functions: Specify the function(s) which the program will perform. Show the relationship to other programs and/or systems/subsystems which interact with this program.

2.3 Performance: Specify the performance requirements.

2.4 Accuracy: Describe data accuracy requirements imposed on the program, such as: mathematical, logical, legal, and transmission.

Note: This may have already been specified in the analysis/design specifications. Items which may be included are algorithms, field accuracy, etc. Field level accuracy may be defined in the Data Dictionary for database applications.

2.5 Validation: Describe the data validation requirements imposed on the program.

Optional: Provide the following information in the edits and/or program logic:

2.6 Timing: Describe the timing requirements imposed on the program such as, under varying conditions, response time; update processing time; data transfer and transmission time; throughput and internal processing time.

Note: The required response time for online applications is generally assumed to be 3 seconds, at the terminal. For batch tasks, any special processing time requirements should be included in the Operator's Manual. Data transfer and internal processing time do not need to be specified for batch processing.

2.7 Flexibility: Describe the capability for adapting the program to changes in requirements such as modes of operation; operating environment; interfaces with other programs; accuracy, validation, and timing; and planned changes or improvements. Identify the components of the program which are designed to provide this flexibility.

Continued on next page

PROGRAM SOURCE CODE, Continued

3.0 Design Characteristics

3.1 Operating Procedures: Describe the operating procedures and any special program functions or requirements necessary for its implementation. Describe the load, start, stop, recovery, and restart procedures. Describe all other interactions of the programs with the operator/administrator.

Note: This information should be included in detail in the Operator's Manual. A general description of any special operating procedures should also be included here.

3.2 Inputs: Provide information about the characteristics of each input to the program, such as:

- 3.2.1 Title and tag
- 3.2.2 Format and type of data, such as the record layout
- 3.2.3 Validation criteria
- 3.2.4 Volume and frequency
- 3.2.5 Means of entry
- 3.2.6 Source document and its disposition, or specific interface source
- 3.2.7 Security and privacy conditions

3.3 Program/Data Logic: Describe the program/data logic by narrative explanations.

3.4 Outputs: Provide information about the characteristics of each output from the program, such as:

- 3.4.1 Title and tag
- 3.4.2 Format specifications, such as a report format
- 3.4.3 Selection criteria for display, output, or transfer
- 3.4.4 Volume and frequency
- 3.4.5 Security and privacy conditions
- 3.4.6 Disposition of products
- 3.4.7 Description of sequence of display, display contents, fixed and variable formats, and display of error conditions

Continued on next page

PROGRAM SOURCE CODE, Continued

3.0 Design Characteristics (continued)

3.5 Database: Describe the logical and physical characteristics of any database used by the program.

3.5.1 Logical Characteristics: Describe for each unique set, file, record, element, or item of data, its identification, definition, and relationships.

3.5.2 Physical Characteristics: Describe in terms of this database, the storage requirements for program data, specific access method, and physical relationships of access (index, device, area), design considerations, and access security mechanisms.

Note: This section may reference details included in the Data Management Plan, as long as enough explanatory information is included here to facilitate maintenance of the program when other documentation is not available.

Section C
Documentation For Others

Section Overview

There are four types of documentation that must be generated for/by individuals and organizations outside the team that are created or started during the Programming Phase. These are:

- Operator's Manual
- User Documentation
- Turnover Package
- System Acceptance Test Cases

Responsibilities

The Operator's Manual is developed by the System Development Team and is approved and used by the Systems Operations Division.

User Documentation and other training materials are created by the Training Branch in conjunction with the System Development Team, for review and approval by the Business Sponsor during the System Acceptance Phase.

The Turnover Package is generated by the System Development Team and accepted by the QAT Lead or Business Sponsor as part of the Migration Turnover/Test Readiness Review before the System Acceptance Phase begins.

Note: Items in the turnover package may be provided to the System Acceptance Test (SAT) Team as they are approved so that Test Cases can be developed.

Test Cases are developed and documented by the SAT Team based on the documentation provided for the Turnover Package.

The users and AIS Security may assist in the construction of these items.

In This Section

OPERATOR'S MANUAL

Project Name:		Project Number:	
Date Prepared:	Date Updated:	Date Presented:	Date Approved:

1.0 System Name

1.1 Original System Date

1.2 Date Changed

1.3 Executable Job Name

1.4 System Users

1.5 Organization Name/Section

1.6 Brief Description of the System or Job

1.6.1 How it supports the organization/function
1.6.2 Identify the major users, organization name, and telephone numbers
1.6.3 Provide a system flowchart showing job run sequences

2.0 Scheduling Requirements

2.1 Scheduling Information

Note: Some of these headers may be modified, in consultation with the Systems Operation Division, to appropriately supply equivalent information for other platforms, e.g., script names, input parameters, Endevor module identification, etc.

2.1.1 Run Frequency
2.1.2 Start Time
2.1.3 Estimated run time
2.1.4 Job class
2.1.5 JCL Parameters
2.1.6 Roscoe member
2.1.7 Partitioned Data Set Member

Continued on next page

OPERATOR'S MANUAL, Continued

2.0 Scheduling Requirements (continued)

2.2 System/Job Dependencies

2.2.1 Specify system(s)
2.2.2 Specify Job(s)
2.2.3 Status of the database

2.3 Start-up Procedures: State any pre-processing procedures that have not been identified above.

3.0 Quality Control Requirements

3.1 List acceptable return codes.

3.2 List messages or displays. Indicate those that should be visually verified or checked.

3.3 State any manual procedures to be performed. Provide a completed sample as a guide.

3.4 State any security measures and/or Privacy and Trade Secrets Act Requirements.

4.0 Restart Procedures (at job/step level)

4.1 Job Name

4.1.1 Database rollback
4.1.2 Job(s) to run prior to restart
4.1.3 Jobs to run in lieu of restart
4.1.4 Restart steps/programs/return codes/description
4.1.5 Notification (if restart is unsuccessful)
4.1.6 Location of restart supporting information

Continued on next page

OPERATOR'S MANUAL, Continued

5.0 Job-Step Flow Diagram

Develop a schematic diagram of the job, showing the details for each step. List input and output datasets, and the database tables accessed. Include information on whether these datasets/tables are being read, updated, or created new.

6.0 Reports/Tapes Distribution

6.1 Job Name

6.1.1 Step name that produces the report/tape
6.1.2 Dataset name that produces the report
6.1.3 State the RCS number and report media (i.e. laser, fiche, dispatch)
6.1.4 Indicate if tape (yes/no) and Dataset name
6.1.5 List report title (as printed on the report)
6.1.6 List total number of copies produced
6.1.7 Give a brief description of each report/tape produced, and attach a one page report sample
6.1.8 State the explicit destination (mailing address) or remote identification
6.1.9 Provide special handling instructions and/or appropriate comments

- State the retention period for data center copies
- State the retention period for off-site tapes

7. 0 Optional Instructions

Provide a listing of job cards, procedures, control cards, scripts, etc.

User Documentation

Introduction

User Documentation could be in any of the following presentation formats:

- User Manual
- Reference Guide
- Quick Reference Guide
- On-Line Guide
- On-Line Help

This topic will primarily address the format to be used for the User Manual.

Security Requirement

All user documentation should address the security requirement concerning "rules of behavior" for individual users of each system. These rules should clearly delineate responsibilities of and expectations for all individuals with access to the system.

Contact the AIS Security Division for additional help or guidance.

Responsibility

The Training Branch is responsible for the creation of the User Documentation and training materials with the assistance of the System Development Team.

The Business Sponsor is responsible for approving these materials during the System Acceptance Phase.

User Manual

The rest of this topic provides the outline and guidelines for the development of the User Manual.

Cover

The following information appears on all User Manual covers in accordance with Customs Issuance Policy, outlined in the CIS Handbook (HB 2100-07):

- Title of the user manual
- Originating Office identification
- Customs Issuance System (CIS) number
- Issue date (month and year)
- U.S. Customs Service seal (hard copy only)
- Use limitations designation (if any)

Continued on next page

User Documentation, Continued

Cover Letter

This letter includes:

- The purpose and use of the manual
- Any superseded issuances
- A standard paragraph regarding updates

The cover letter is signed by the Assistant Commissioner, Office of Information and Technology (hard copy only).

Disclosure Warning Statement

This page presents a warning to U.S. Customs personnel that the disclosure of certain information contained in the user manual is prohibited by law and may result in the assessment of criminal penalties.

Table of Contents

The Table of Contents lists all chapters, chapter subheadings, and Appendices within the user manual.

Getting Started

"Getting Started" is the first chapter in the user manual. The chapter is standard and includes the following information:

- A section on how to use the user manual
- Presentation conventions used in the manual
- A 30-second guide on using the system

Other explanatory information may be included at the discretion of the writer based on the scope and subject matter of the book.

System Overview

A system-specific overview chapter is included next in the user manual. This chapter provides:

- The purpose of the specific system
- Relevant historical background
- A description of this system's interaction with other systems
- Other information pertaining to the system that would be helpful to the user
- A graphic presentation of the system and the processing tasks described in the manual

Continued on next page

User Documentation, Continued

Security Features

This chapter will explain to the user the system's security features and how to use them. "Rules of Behavior" for the system should also be included.

Reference: Volume II, Chapter 15, Section F, *Security Features User's Guide*

Chapters

Definition: A chapter represents a processing category or a logical grouping of functions/information.

The number of chapters in the user manual will vary depending upon the scope and subject matter. Tasks within each category should be presented in logical processing order. Each chapter should include the following:

- Chapter title
- Lead-in paragraph including a statement of purpose (when and why)
- Step-by-step instructions by processing task
- Sample screens
- Quikscan steps

Quickscan Steps

Each chapter includes a set of quick instructions designed for experienced users. These instructions or steps appear in the left column of the manual and are very brief keyboard commands, data fields, and/or instructions.

The quickscan steps appear next to the corresponding step in the detailed instructions on the right side of the page.

Appendix Convention

Usually, Customs user documentation has four appendices, lettered A to D. If any of these appendices do not apply, please annotate as "not applicable" in the Table of Contents.

Appendix A

This standard appendix defines the following:

- System function codes
- Sort keys
- Fast-path references, etc. presented within the user manual

Continued on next page

User Documentation, Continued

Appendix B	This standard appendix defines data fields on query (locate, see, inquire) screens that are not already defined as part of the data entry instructions.
Appendix C	This standard appendix lists reports associated with the system covered by the user manual and provides a brief description of each report.
Appendix D	This optional standard appendix provides troubleshooting tips and problem resolution(s). Access to this type of information will determine whether this appendix is included in the manual.
Additional Appendices	Additional appendices are optional. These appendices are included if any additional information such as codes, charts, or references is necessary to help the user.
Glossary	A glossary is included in the user manual. System-specific terms and definitions should be added to the standard glossary of general system-related terms.
Index	An alphabetized listing of subjects and the page on which an item is mentioned is included in the user manual.
Comments Form	The comments form is standard for the user manual. This form enables a user to submit suggestions, comments, corrections, and updates to the manual.

TURNOVER PACKAGE

Introduction

Preparation of the Turnover Package represents the final task in system development before the system goes to acceptance testing.

Responsibility

The System Development Team is responsible for the creation of the Turnover Package before the Migration Turnover/Test Readiness Review at the end of the Programming or Construction Phase.

The QAT Lead or Business Sponsor approves the completeness of this turnover package for the specific project before the System Acceptance Test (SAT) Team begins its work in the Acceptance Phase.

Package Contents

The turnover package consists of the most recent versions of the following work products, as available:

- Project Concept
- IRB Steering Committee Approval
- Project Plan (the portion pertaining to testing and implementation)
- Operator's Manual
- Source Code
- System and Security Test Plans
- User Requirements
- Functional Requirements
- System and Security Design
- Change Request (CR)
- Operational Problem Report (OPR)
- Program Specifications
- Program Modification Log
- Tested software components, clean compiled and error free
- Request for Service
- Any other product-specific documents.

Note

All of the documentation listed above must be provided to the testing organization as soon as it is approved. This will assist the SAT Team to develop the required detailed Test Plans and Test Cases in a timely fashion.

Test Cases Sample Format

Introduction

Test Cases, also known as Test Scripts, are developed at multiple levels to verify correctness and completeness of the application based on the:

- User and functional requirements
- User acceptance criteria
- System and security designs
- System and security test plans
- Program and database specifications

Test Cases vs. Requirements

A specific test case can potentially validate multiple requirements/specifications; and validation of a particular requirement or criteria may require multiple test cases to be defined.

To ensure completeness, these relationships can be documented in the project's Requirements Traceability Matrix, if one exists.

Responsibility

The System Acceptance Test (SAT) Team is responsible for creating these Test Cases and documenting the test results. If errors are discovered, these are also documented and tracked. The System Development Team is responsible for fixing errors found and resubmitting the module for re-testing.

The Project QA Team should review a subset of these documents to verify that sufficient Test Cases are developed for modules and that testing has been properly accomplished and tracked. The QAT Team Lead may independently review project test cases and results as well.

Test cases and their documentation should be saved to be used in future regression tests of the same modules during integration, user acceptance testing, and/or maintenance.

Continued on next page

Test Cases Sample Format, Continued

Sample Format Test Cases should document the specific test(s) to be accomplished, the expected results, and the actual results for each specific [identified] project, function, module, and screen to be validated.

Example:

Test Objectives	Expected Test Results	Actual Test Results (Pass or Fail)
SYSTEM DATE		
Verify the accuracy of date/time displayed on the screen based on the Virtual Clock Definition entered in TICTOC.	System date should reflect the TICTOC date setting. Set TICTOC to the following high-risk and sample dates: 01/01/1999 02/29/2004 12/31/1999 03/01/2004 01/01/2000 06/07/2010 02/29/2000 06/07/2029 03/01/2000 12/31/2039 10/01/1999 10/01/2001 09/30/1999 09/30/2000 TICTOC date and the present time should be the same display on the screen.	Pass. See attached screen print documentation.
Verify the accuracy of date/time displayed on the screen based on the Virtual Clock Definition entered in TICTOC.	Set TICTOC to rollover to the following high-risk and sample date transactions: 12/31/1998 to 01/01/1999 12/31/1999 to 01/01/2000 02/28/2000 to 02/29/2000 02/29/2000 to 03/01/2000 12/31/2000 to 01/01/2001 02/28/2004 to 02/29/2004 02/29/2004 to 03/01/2004 TICTOC date and the present time should be the same display on the screen.	Pass. See attached screen print documentation.

STARS Screen Examples

Introduction The sample STARS screens following illustrate an online Service Request (e.g., a TPR, APR, OPR, CR, and/or Move Request). Which type of service request is being displayed depends on how the request was initiated, its status, and the life cycle phase of the activities performed. The three screens shown are for one example request.

Note: The possible life cycle status indicators displayed on the first screen also summarize the workflow cycle that a particular request can be tracked through.

Screen 1:

```
SEL: ST A A 3 _              REQUEST FUNCTIONS            DVL CPR02501 CMR02501
PF __                      QUERY REQUEST DETAILS                090498    17:23

STATUS: DVL DEVELOPMENT  DESC: TEST STARS
CAL YR: 1998 ENV: ADM SYSTEM/PROJ: PERKS SUBSYS: _____ REQ DATE: 08 / 14 / 1998
             REQ TYPE: C   REQ/TASK NO: 0002   TPR NO: 0000   APR NO: 0000

REQSTR: A. MCKENZIE        PHONE: 202 - 376 - 7010  NEED DATE: __ / __ / ____
NETMAN TKT: N NO: __________  ATTACH: Y LOC: Y
PRIORITY: 1   DOC NEEDED: N   TRAIN NEEDED: N TEAM LEAD: ____________________

 REQ ->  APPRVD: Y    ON-HOLD: _      CANCELED: _      REJECTED: _
 DVL ->  ACCPTD: Y     ASSGND: Y ANLYS CMPLTD: Y   PGM CMPLTD: _  DVL CMPLTD: _
  CM ->  ACCPTD: _     ASSGND: _  SRCE CMPLTD: _ CMPLE CMPLTD: _   CM CMPLTD: _
  QA ->  ACCPTD: _     ASSGND: _   SENT TO CM: _ TEST STARTED: _ TEST CMPLTD: _
USER ->  ACCPTD: _     ASSGND: _ TEST STARTED: _      SIGN-OFF: _ USER TESTED: _
PROD ->  ESTIMATE MOVE DATE: __ / __ / ____    ACTUAL MOVE DATE: __ / __ / ____

PROB TYPE: _____ BROKER NOTIFY: _      DEPEND PROJ: _   HOURS QA TESTED: ___
CASE MODEL: _ CASE VERS: _________     BINDER NO: ___   TAB NO: __


PF1-HELP         3-RETURN       4-TBL LOOKUP   5-CLEAR        10-SUB MENU
11-STARS MENU    12-LOGOFF      14-COMMENTS    19-PREV REQST  20-NEXT REQST
```

Continued on next page

STARS Screen Examples, Continued

Screen 2:

```
SEL: ST A A 3 _              REQUEST FUNCTIONS            DVL CPR02601 CMR02601
PF __                      QUERY REQUEST COMMENTS               090498    17:31

STATUS: DVL DEVELOPMENT  DESC: TEST STARS
CAL YR: 1998 ENV: ADM SYSTEM/PROJ: PERKS SUBSYS:       REQ DATE: 08 / 14 / 1998
             REQ TYPE: C   REQ/TASK NO: 0002   TPR NO: 0000   APR NO: 0000

SEQ NO. *************************  REMARKS  ******************** PAGE NO. 001
0001 NAME: A.MCKENZIE          USER ID: BAEB769 DATE: 08/14/1998
0002 TEST STARS SYSTEM.




0235-THESE ARE ALL THE COMMENTS FOR THIS REQUEST.
PF1-HELP         3-RETURN       5-CLEAR        10-SUB MENU    11-STARS MENU
12-LOGOFF        13-DETAILS     15-DATES       ENTER-PROCESS
```

Screen 3:

```
SEL: ST A A 3 _              REQUEST FUNCTIONS            DVL CPR02701 CMR02701
PF __                      QUERY REQUEST DATES                  090498    17:31

STATUS: DVL DEVELOPMENT  DESC: TEST STARS
CAL YR: 1998 ENV: ADM SYSTEM/PROJ: PERKS SUBSYS:       REQ DATE: 08 / 14 / 1998
             REQ TYPE: C   REQ/TASK NO: 0002   TPR NO: 0000   APR NO: 0000

    DATES                              POINT OF CONTACT  PHONE NUMBER
-------------- ------------------------- ----------------- ----------------
08 / 14 / 1998 REQUEST ENTERED           A. MCKENZIE       202 - 376 - 7010
08 / 14 / 1998 REQUEST APPROVED          A. MCKENZIE       202 - 376 - 7010
08 / 14 / 1998 DVL ACCEPTED              A. MCKENZIE       202 - 376 - 7010
08 / 14 / 1998 DVL ASSIGNED              A. MCKENZIE       202 - 376 - 7010
08 / 14 / 1998 DVL COMPLETED ANALYSIS    A. MCKENZIE       202 - 376 - 7010
__ / __ / ____ _____________________________ _____________ ___ - ___ - ____
__ / __ / ____ _____________________________ _____________ ___ - ___ - ____
__ / __ / ____ _____________________________ _____________ ___ - ___ - ____
__ / __ / ____ _____________________________ _____________ ___ - ___ - ____
__ / __ / ____ _____________________________ _____________ ___ - ___ - ____
__ / __ / ____ _____________________________ _____________ ___ - ___ - ____

0240-THESE ARE ALL THE DATES FOR THIS REQUEST.
PF1-HELP         3-RETURN       5-CLEAR        10-SUB MENU    11-STARS MENU
12-LOGOFF        13-DETAILS     14-COMMENTS    ENTER-PROCESS
```

Section D
Design and Programming Checklists

Section Intent

These checklists are not intended to replace other quality assurance activities.

They are merely tools to "jog" the Project Management and System Development Team members' memory as to tasks that should be accomplished.

Reference: Volume II, Chapter 17, Section F, *Quality Assurance Checklists*, for additional questions.

In This Section

Design Checklist

Design Phase Reminders

- Is the equipment configuration needed to process the system defined?
- Is the necessary system software defined?
- Are data management considerations defined?
- Has the logical data base been approved?
- Have all security and Privacy Act requirements of the system been met?
- Are I/O designs consistent with approved I/O requirements definitions?
- Have checkpoint/restart provisions been defined?
- Have telecommunications requirements been fully documented?
- Does the system structure clearly show boundaries of each design unit or job stream?
- Has the System Test Plan been updated and approved by the Business Sponsor?

Programming Checklist

Before Programming Begins...

- Is there a clear separation of mainframe files from work files, tables, and output files?
- Is a data conversion effort planned and documented?
- Does the data repository contain all data flows and data stores used throughout the system?
- Have lists of constraints, codes, and tables been provided?
- Have all interactive dialogues been fully documented?
- Do these specifications describe the program performance requirements?
- Has a description of the program's logic (including flowcharts and decision tables) been supplemented by narrative explanation?
- Have the logical and physical characteristics of all databases used by the program (including file layouts and data element definitions) been provided?
- Have appropriate programming standards and screen conventions been provided to the Developers?

Documentation Checklist

Does the Operator's Manual Include...	• A diagram showing the inputs, outputs, data files, and sequences of operations of the computer-based system? • An inventory of each permanent file that is referenced, created, or updated by the system? • A list of the various runs possible and a summary of each run's purpose? • Job control statements or Scripts needed for each run? • Emergency procedures? • The input and output files for each run? • The restart/recovery procedures? • A warning about the applicability of the Privacy Act and caution about the civil and criminal penalties for unauthorized disclosure of system data?
Does the User Documentation Include...	• The requirements for preparing and entering input data? • Step-by-Step procedures required to initiate processing? • Explanations of the security features and how to use them? • Plans for training follow-on personnel and updating courses as required? • A warning about the applicability of the Privacy Act and caution about the civil and criminal penalties for unauthorized disclosure of system data?